MISSOURIENSIS

The Journal of the Missouri Native Plant Society

VOLUME 2, NUMBER 3 **WINTER, 1981**

IN THIS ISSUE

OENOTHERA

Minutes of the Last Meeting.....pg. 1
New State and County Records..... 4
Flora of Missouri Project..... 5
New Histological Study..... 7
Missouri's Natural Divisions..... 8
Endangered Species Report..... 12
"Our" Missouri Primrose..... 14
Plan to be with Us in March..... 17
Some Thoughts on Collecting..... 18
Tree Key for the Blind..... 20
Editorial Assists..... 21
Comment on Whitlow..... 22
Gracias..... 22
Errata..... 23

RUDBECKIA

MINUTES OF DECEMBER MEETING

December 6, 1980

The Missouri Native Plant Society held its sixth board meeting 10:00 a.m. at Linda Hall Library in Kansas City. An introduction and tour preceded the meeting given by Mr. Bruce Bradley of the Library. The tour included a visit to the History of Science Collection housing many rare books. In tune with the interests of the Society, several rare works of botanical nature were displayed including John Gerard's "Herball", the original published in London in 1597; William Curtis' "Flora Londinensis" (1775); and the "Curtis Botanical Magazine". The Society was astonished by the delicate and beautiful hand-painted engravings exhibited in the works of Curtis.

Board Members present: Jon Hawker, President; Melvin Conrad, Vice-president; Paul Nelson, Secretary; Jim H. Wilson, Treasurer; Robert Mohlenbrock, John Karel, Ginny Klomps, Rick Daley, Erna Eisendrath, Ken Olson, and Diana James.

Society members and guests: Art Christ, Albert Haller, Karen Haller, John Molyneux, Leo A. Galloway, Steve Timme, Sherry Morgan, Louis Bottenberg, Esther O'Connor, Norlan Henderson, Don Tripp, John Wylie, Agnes Wylie, Paul Thomson, and Marie Edwards.

The meeting was called to order by Jon Hawker welcoming those present and expressing an appreciation to Dr. Norlan Henderson and the staff of Linda Hall Library for hosting the meeting.

Jon Hawker reported on several small items of business. These included:

1) Jon Hawker sent a letter to Mr. James Reed of the Missouri Botanical Garden indicating the Board's unanimous concurrence in having the MBG house archival material of the Society. The Board will determine what constitutes archival material before sending it to the MBG.

2) Resignation of Vice President Edgar Denison was accepted and letter of regret from Jon Hawker read.

3) Some 15 other state native plant societies now exist. Several of these Societies, such as the California Native Plant Society, have contacted MoNPS soliciting interest in forming an alliance group of societies in the West (Association for Western Plant Societies). Discussion of advantages included sharing of ideas, goals, philosophy, and communication. Interest in communicating was especially important for societies near the midwest because of similar flora regions.

It was motioned to proceed communicating with all native plant societies expressing interest in joining and sharing information.

A. Minutes of September 6, 1980 Meeting - Dr. Weber ask for clarification of the role served by the Nominating Committee in appointing or searching for persons who would serve on other committees and who would determine the objectives and functions of each committee created. It was determined that the Nominating Committee would search for people to serve on other committees with final approval made by the President. Objectives and functions of the committees are to be determined by the Board as stated in the by-laws. No other changes, the minutes were approved.

B. Treasurer's Report - Our report indicated to date $2,633.66 in the account with expenditures including only the first installment of payment on computer facility and postage. There are some 300 members in the Society.

John Karel and Jon Hawker will prepare a letter to Senators Eagleton and Danforth introducing them to the Society and pursuing tax exemption status.

C. Agenda - Old Business -

1.) The subject of encouraging the creation of wildflower areas along highways was discussed. Don Christensen has submitted a letter of interest to the Highway Department in establishing roadside wildflower areas. Rick Daley reported on the Missouri Botanical Garden's effort to encourage the Highway Department to participate with resources available from the MBG to assist.

2.) Jon Hawker sent a letter to the Audubon Society expressing an interest in joint sponsorship of a field trip.

3.) Jim H. Wilson received a letter from Jean Freiling expressing interest in stimulating local activity on flora.

4.) Nominating Committee - Dr. Weber, Chairman of the Committee, reported on the progress of screening individuals to serve on other committees. Comments were received from the Board regarding candidates and volunteers. The number of candidates selected for the slate would be left to the decision of the Committee.

5.) Logo Contest - Because of the exceedingly low number of votes for logo entries the contest was declared null and void.* There was a motion to contact a commercial artist to design a logo which would be circulated among the Board before the next meeting to decide on the design and select an artist. John Karel will chair a selected group consisting of Rick Daley, Gary Reese, Steve Timme, and Diana James to work on this project.

6.) Board Vacancies - Melvin Conrad was selected by the Board to serve as interim Vice-President in Edgar Denison's place. Ginny Klomps was appointed to fill Melvin Conrad's place on the Board. Mrs. Frederick James, elected during the last meeting, was officially seated on the Board.

7.) Herbarium Curator Assistant, University of Missouri, Columbia - John Karel asked about the status of a letter of support on behalf of the Society to be sent to University officials. Gary Reese announced he had prepared a response for the President's signature which will be carboned to the Board.

D. New Business -

1.) Minutes printed in Missouriensis - Official minutes of each Board meeting will be printed in Missouriensis subject, as will be all articles, to editorial guidelines recently established by the Editor.

2.) Editorial Review Committee - Editor, Erna Eisendrath, asked for the advice of the Board in balancing between academic and professional articles in Missouriensis. An editorial review committee will determine this.

3.) Natural Heritage Inventory of Missouri State Parks - John Karel presented a recently completed publication entitled "Natural Heritage Inventory of Missouri State Parks" by Paul Nelson to the President of the Society. This report includes compiled information on designated state Natural Areas, rare and endangered species sites, critical breeding habitats, and native grassland management areas on state park lands. Descriptions of natural communities, unique flora and fauna, and geological areas are described for each park. **

4.) MoNPS response to Ozark National Scenic Riverways workbook. The National Park Service has recently conducted a series of planning worksnops to solicit public input into assimilating management alternatives for issues involving the future management of Current and Jacks Fork Rivers. Several issues are of interest to the Society, including rare and endangered plant species management, wilderness, and maintenance of natural communities. Paul Nelson will consolidate comments on the workbook from the Board and draft a response for the President's signature (will be sent to Vice-President, Melvin Conrad, in John Hawkers absence).

---

*Editor's note: a further reason for this decision was based on a letter from Peter Raven, Director of the Missouri Botanical Garden, pointing out the fact that Oenothera missouriensis illustrated in several of the logos submitted, is now officially O. macrocarpa. The reasons for this nomenclatural change are spelled out by Warren Wagner on pg. 14.

**According to John Karel this excellent summary of the natural features of the State Park System should be of considerable interest to students of natural history, and will be available free, for a limited time, to members of MoNPS.

5.) A photo exhibit case to be used by the Society for promotional purposes was presented by Karen Haller. Edgar Denison supplied the design and photographs while Karen Haller's father built the display case. Both Edgar and Karen's father are to be thanked by the Society for their efforts in completing this excellent display

E. Next Meeting - Spring Field Trip - Our next Board meeting will be held 7-8 March to be cosponsored with the Ozark Wilderness Conference. Guest speaker at the conference will be David Brower. A field trip will be planned. ***

Respectfully submitted,

Paul W. Nelson, Secretary

***For further information, see pg. 17

NEW STATE AND COUNTY RECORDS

NEW FINDS IN TANEY COUNTY

Dr. Alice Nightingale
Department of Biology
School of the Ozarks
Point Lookout, MO 65726

Sherardia arvensis L. or Field Madder (Rubiaceae) has not been reported from Taney Co. by Steyermark although he reports it from Barry and Newton Counties. We located it first on the School of the Ozarks campus 4/10/60, growing as a small patch near Lake Honor. It showed little evidence of spreading until 6/7/76, when I collected it in the lawn near the rose garden opposite Good Memorial Bldg. For two years it continued to spread in that area. This year it was collected (5/6/80) growing in healthy profusion as a weed under some Redbud trees near the entrance door of Pfeiffer Science Building.

Although the four-lobed flowers are very tiny, the six one cm. long, sharp-pointed leaves, which occur in a whorl, are very noticeable. Steyermark's picture, p. 1391, shows four leaves in a whorl and Britton & Brown consider that it has four leaves and two foliaceous stipules, but all six look alike in nature. Sent to Mo. Bot. Gard. as our Soto #3450B.

Paulonia tomentosa (Thunb.) Steud. Empress Tree or Princess Tree (Scrophulariaceae) is not reported from Taney Co. by Steyermark. It was collected 5/7/80 by Dr. Kenton Olson in a gulley inside the right-of-way fence along Highway 65, Branson Bypass, just before you reach the Cliff Drive overpass when headed south. There is no sign of habitation ever having been anywhere nearby. Soto #2302d sent to Mo. Bot. Gard.

CICUTA MACULATA VARIETY CURTISSII FOUND IN MISSOURI

Arthur Christ
3458a Watson Rd.
St. Louis, MO 63139

On a recent field trip, 9/24-26/80, to the Holly Ridge Preserve area in Stoddard County, we found Cicuta maculata var. Curtissii in a wet ditch next to the St. Louis Southwestern railroad tracks. It seems as if this is the first time that this variety has been found in Missouri. It differs from Cicuta maculata in that it is a coarser plant and is darker green. Also it has larger and thicker leaflets, and usually has a dark furrow separating the marginal or lateral ribs of the fruit.

There was a large colony of this variety in the wet ditch next to the railroad tracks. Some of the plants were in flower, some had just finished flowering, while others were in various stages of fruit development. We saw only this one large colony in the area which was a short distance from the Holly Ridge Preserve.

In the seventh edition of Gray's Manual of Botany this variety was treated as the species Cicuta Curtissii with the statement that it is probably only a variety of Cicuta maculata. Also in the old edition of Britton & Brown it is treated as a species.*

*Editor's note: In the latest editions of both works the plant is treated as a variety.

FLORA OF MISSOURI PROJECT: COMMENTS BY STEYERMARK AND WEBER

Wallace R. Weber
Department of Life Sciences
Southwest Missouri State University
Springfield, MO 65802

Erna Eisendrath recently sent me a letter from Dr. Steyermark, now living in Venezuela, in which he commented on our proposed flora of Missouri project. In view of his long and continued concern with the flora of Missouri, I think it is appropriate that we share his letter with members of MONPS. Following is an excerpt from that letter:

> I am enjoying each of the issues of Missouriensis which are being sent me. I wish I could contribute some notes, but my time here is so limited. I read with great interest the part concerning the proposal for a new plant manual. I am well aware of the need to bring the Flora of Missouri up to date, especially as regards all the new introduced plants along railroads which Dr. Victor Muehlenbach has published on during the past several years. I am sure Dr. Weber's reasons are legitimate ones for initiating this project. It is gratifying to see how my own book has stimulated so many amateurs and professionals to continue the work I loved so dearly.

Actually, the Iowa State University Press, publishers of the Flora of Missouri, had wanted to bring out a new edition of this work, but have only had new printings instead. I had been interested, of course, in bringing the new data and introduced species records up-to-date in such a revised treatment, but thus far nothing has resulted. Perhaps it would be possible for me to participate in the preparation of your new projected manual, since I am, of course, sincerely interested in continuing my own efforts in the Missouri flora.

I would like to comment on some of the points raised by Dr. Weber.

1) I agree that keys could be tailored to much shorter terminology and briefer treatment in general.
2) Considering the total number of taxa to be itemized, it is difficult to visualize how the inclusion of descriptions for families, genera, and species in such a work could produce a less bulky work, even when maps and illustrations are excluded.
3) I would view with some apprehension the end product of such a manual as is intended if too many contributors, as indicated on page 5 of Missouriensis, are brought into the work. Such an assemblage of contributors usually results in lack of uniformity and overall treatment of the family involved. It is preferable to have one person, for the sake of style, grammar, uniformity, and overall treatment, to be responsible.

In general, I would like to participate in such a project, since I had hoped one day to bring my work up-to-date. Whatever I can do to help, of course, I would try to lend my hand. It should be taken into consideration, of course, that care must be used not to duplicate any portion of the Flora of Missouri where the copyright legalities would be involved.

In the meantime, I trust that your group will continue its interest in the project to which I lend my most heartfelt support.

Because of the several questions raised by Dr. Steyermark concerning our project, Mrs. Eisendrath asked that I comment briefly about his concerns.

I think there may be some misunderstanding by Dr. Steyermark and others concerning the original purpose of the project. Never was it intended to replace the Flora of Missouri, or even to be a revision of it. Rather, it was to be a separate entity and serve two general purposes -- an inexpensive manual for students and a small-sized manual for convenient use in the field. In my view, its only resemblance to the present Flora of Missouri would be in the arrangement of the taxa and the use of some of the same characteristics in the keys. Keys are seldom completely original and usually reflect the studies of the original monographer.

While the purpose is not to redo Steyermark, it is hoped that the studies carried out on our project would ultimately stimulate and contribute to a revision of Steyermark's Flora of Missouri, or the completion of some other definitive work which would include distribution maps. I would hope that those who contribute to the present project would, through herbarium studies, update distribution records of the taxa with which they are working, and refer their information to Gary Reese who is now prepared to gather and centralize this information.

To have several publications on the flora of a state would neither be a duplication of efforts, nor would it be unique to Missouri. Ohio has had Weishaupt's Vascular Plants of Ohio since 1960, which was originally intended as a manual for students. However, continuing studies on the flora of Ohio by the Ohio Flora Committee has resulted in volumes on The Woody Plants of Ohio and The Monocots of Ohio by E. Lucy Braun, with other volumes anticipated. In Illinois, Mohlenbrock's Guide To The Vascular Flora of Illinois has not made the several volumed, more detailed works of the Illustrated Flora of Illinois any less valuable.

Dr. Steyermark's concern about too many contributors resulting in a lack of uniformity is certainly legitimate. However, Dr. Mohlenbrock and I have drawn up a format we would like to have contributors use as a guideline. Furthermore, we, as editors of the volume, would attempt to minimize the differences in style, grammar, etc., that would tend to detract from its use.

Finally, Dr. Steyermark raised the point that my desire to include descriptions of families, genera, and species would not lessen the bulky nature of the volume. As much as I would like to include these descriptions, I must concede that Dr. Steyermark is correct, and our plans are now to omit such descriptions.

I am pleased that Dr. Steyermark has endorsed our project and I have appreciated his comments. I would like to reiterate from his letter that his book has indeed stimulated people to continue his work. For that contribution, and any future contributions, we are most grateful. Likewise, I would like to reiterate from my response that I hope this project will stimulate members of MONPS to contribute something to the flora of Missouri, and that eventually it will further stimulate the revision of Steyermark's Flora of Missouri, or the publication of some other comprehensive volume or volumes with up-to-date distribution maps. To that ultimate end, let us get on with our work.

NEW HISTOLOGICAL STUDY

Ginny Klomps Missouri Department of Conservation
Box 180, Jefferson City, MO 65702

I would like to bring to the attention of MoNPS members a recently printed work of botanical significance. One of our own members, Leroy Korschgen, has spent the past several years doing a detailed histological study of the monocots of Missouri, and is presently working on the dicots. His work on the sedges and grasses has recently been printed in two volumes as a Pittman-Robertson publication. Leroy undertook this monumental task to help him identify bits of plant material found in the stomachs of animals, because as food habits specialist for the Missouri Conservation Department, that is where his interest lies. However, his work will also prove invaluable to botanists, biologists and even paleontologists.

The work is technical and not for the lay person, and few copies have been printed. Eventually Leroy hopes to publish his work in book form. In the meantime, copies have been sent to the Missouri Botanical Garden, the University of Missouri at Columbia, and Southwest Missouri State University, where they are available for use.

MISSOURI'S NATURAL DIVISIONS

Richard H. Thom
Missouri Department of Conservation
Box 180
Jefferson City, MO 65102

Have you ever wondered what America would be like if the Vikings had been successful in colonizing our part of the New World instead of English-speaking people; or if the young United States government had said "no deal" to France on the Louisiana Purchase (which included Missouri); or if the South had defeated the Union in the Civil War? On a more personal level, you know the world would be a little different had your grandmother never met your grandfather. It is easy to appreciate that history influences our language, culture, politics, and ancestry.

Land, too, has a history. Forces and events of the remote past have influenced Missouri's landscape in both striking and subtle ways. A naturalist muses over the effects of these ancient natural forces just as a historian considers past human events in building an understanding of the present.

A student of Missouri's natural history might ask what north Missouri would be like if the great ice sheets had not crunched and scraped their way over that part of the state 500,000 years ago; or what the Ozarks would have been like if they had not been exposed to erosion as a land area for hundreds of millions of years.

Of course, such questions can never be answered in full, but it is possible to trace back through Missouri's natural history for explanations of what has happened over such long periods of time, and thus to explain some of today's natural history features of the state. Therefore, Jim Henry Wilson, the Conservation Department's endangered species specialist, and I have sought the help of specialists in many fields to develop a map which divides the state into major regions based on geologic history, soils, topography, plant and animal distribution, and other natural features. As seen on page , the map shows 6 Natural Divisions of the state, divided into 19 sub-regions, or Sections.

Many people think of forested Ozark hills and hollows when they think of Missouri. This is indeed a typical landscape of the Ozark Natural Division, of which people are wont to say, "Our hills are not very high, but our hollows are deep." And this is for good reason. The Ozark Division has an ancient geological history which included several periods of slow uplift accompanied by deep erosion by its streams. This erosion of a fairly level plateau has caused a landscape of deep, winding hollows and steep cliffs with few prominent peaks. The erosion also exposed a variety of rocks including sandstone, limestone, dolomite, chert, granite, and rhyolite.

The Ozarks have been an exposed land mass for over 250 million years while surrounding regions were repeatedly covered by glacier, seas, or floods. Staying high and dry for so long permitted uninterrupted use of the Ozarks by plants and animals. The great age together with diversity of rock types, soils, and topography created habitats for more species of animals and plants than in any other part of the state. Some species, such as the cave-dwelling Grotto Salamander, are found nowhere else in the world. Special features

such as caves, sinkholes, springs, and losing streams are associated with the limestone geology and, again, with great geologic age. Thin Ozark soils often allow the bedrock to be exposed to form another typical Ozark natural community--the glade. Savannas, habitats of thinly-spaced trees and prairie understory, occurred where the western prairies met the Ozark forests, in which pine and deciduous trees made up most of the presettlement vegetation. The Ozark Division is subdivided into 6 Sections based on differences in soils, topography, bedrock, and river drainages.

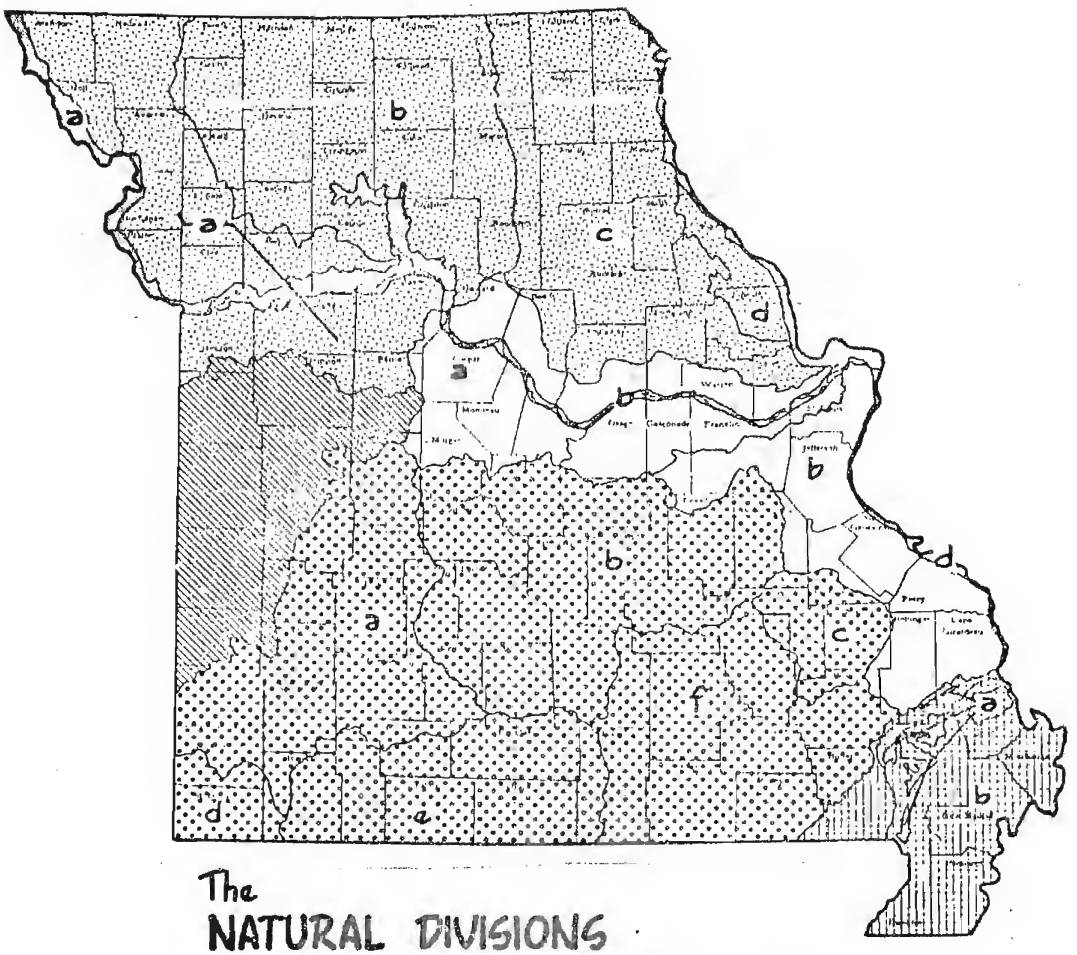
Most of the state north of the Missouri River was covered by great ice sheets. Two major glaciers leveled the landscape and pushed rocks and soil over the bedrock. The last Missouri glacier retreated perhaps 400,000 years ago, although other glaciers occupied parts of Iowa and Illinois as recently as 12,000 years ago. The landscape features of the Glaciated Plains Natural Division are therefore much younger than those of the Ozarks, and erosion has not had so long a time to sculpture the landscape.

Besides having a leveling effect, the glaciers deposited silts, sands, gravels, and boulders, providing parent materials for soil development. The ice sometimes ground rock into a fine "glacial flour" which was picked up by the wind and deposited over the landscape as loess. Along the Missouri River the loess often accumulated to thicknesses of tens of feet. In the northwestern counties the wind deposited the loess in a series of steep dunes or mounds which form a line along the east side of the Missouri River.

The gentle terrain and deep soils have made the Glaciated Plains Division ideal for agriculture. Presettlement vegetation was about half deciduous forest and half tall grass prairie. Prairie has all but disappeared from the Glaciated Plains, but tiny remnants along some railroad tracks still testify to its former existence. The 4 Sections of the Glaciated Plains are based on differences in soils, river drainages, and glacial history.

The Ozark Border Natural Division is a broad transition zone where the Ozarks blend into other regions to the north and east. Ozark-like hills and hollows occur along the major streams, but the soils, often derived from loess, are often deeper and more productive than those of the Ozarks. The ranges of many plants and animals of the Glaciated Plains and the Ozarks overlap in the Ozark Border Division. The Ozark Border was mostly forested in presettlement times, but prairies, glades, and other natural communities also occurred. Springs, caves, sinkholes, cliffs, and pinnacles are common natural features. The Ozark Border Division is subdivided into 2 Sections.

The Missouri and Mississippi Rivers and their former floodplains and terraces are distinctive enough to form their own Big Rivers Natural Division. The lower portions of the Grand and Des Moines Rivers are also included. The big rivers and their associated land areas have been altered greatly by channel modification, leveeing, construction of locks and dams, and agriculture. Chutes, sloughs, islands, sand and mud bars, marshes, prairies, and forests once covered the Division. The soils are deep sediments that the rivers deposited during recent geologic times.



The NATURAL DIVISIONS of Missouri and their sections

R.H. THOM and J.H. WILSON

GLACIATED PLAINS

a WESTERN
b GRAND RIVER
c EASTERN
d LINCOLN HILLS

BIG RIVERS

a UPPER MISSOURI
b LOWER MISSOURI
c UPPER MISSISSIPPI
d LOWER MISSISSIPPI

OZARK BORDER

a MISSOURI RIVER
b MISSISSIPPI RIVER

OSAGE PLAINS

OZARK

a SPRINGFIELD PLATEAU
b UPPER OZARK
c ST. FRANCOIS MOUNTAINS
d ELK RIVER
e WHITE RIVER
f LOWER OZARK

MISSISSIPPI LOWLANDS

a CROWLEY'S RIDGE
b LOWLANDS

ENDANGERED SPECIES REPORT

Sherry Morgan
Missouri Department of Conservation
Box 180, Jefferson City, MO 65702

The Department of Conservation has recently completed status reports on thirty plant species that have been proposed for federal listing. These reports were funded by the U.S. Fish and Wildlife Service and will be used by the Office of Endangered Species when considering the listing of a particular species.

These reports include information on nomenclature, taxonomic problems, legal status, descriptions, distribution, and habitat descriptions. Site visits to populations yielded information on current distribution in Missouri, population biology, associated species, threats to populations, and management recommendations. Missouri Native Plant Society members assisted by providing information about various populations of these species. Final reports to the Fish and Wildlife Service included recommendations to either list species, drop them from consideration for listing, or obtain more information.

The status of the following species warrants their being listed as endangered species:

Asclepias meadii - Mead's Milkweed
Geocarpon minimum - Geocarpon
Lesquerella filiformis - Bladder-pod
Lindera melissifolium - Pondberry
Trillium pusillum var. *ozarkanum* - Ozark Wake Robin

The status of the following species in the state of Missouri warrants listing as endangered or threatened species; however, information on status in other states of occurrence is needed before listing decisions are made: (E - endangered, T - threatened)

T -*Boltonia asteroides* var. *decurrens* - False Starwort
T -*Castanea ozarkensis* - Ozark Chinquapin
T -*Callirhoe papaver* var. *bushii* - Bush's Poppy Mallow
T -*Chelone obliqua* var. *speciosa* - Rose Turtlehead
E -*Cypripedium candidum* - Small White Lady-slipper
E -*Cladrastis lutea* - Yellowwood
E -*Draba aprica* - Whitlow Grass
E -*Isotria medeoloides* - Small Whorled Pogonia
E -*Neviusia alabamensis* - Alabama Snowreath
E -*Platanthera flava* var. *flava* - Pale Green Orchid
E -*Platanthera leucophaea* - Prairie White-fringed Orchid
T -*Sullivantia renifolia* - Sullivantia

More information is needed about the following species before status recommendations are made:

Taxonomic verification is needed for:
Calamagrostis insperata - Reed Bent Grass
Heuchera missouriensis - Missouri Alum Root
Sporobolus neglectus var. *ozarkanus* - Bald Grass

Information on distribution is needed for these species:
Carex socialis - Unnamed sedge
Platanthera peramoena - Purple Fringeless Orchid

(Note: *Carex socialis* was described in 1969 and is not yet found in most current manuals and floras. Distribution records for *Platanthera peramoena* in Missouri need to be updated.)

It has been recommended that the following species be dropped from consideration for listing:

Amorpha brachycarpa - Hairless Leadplant
(apparently not a valid species)
Muhlenbergia curtisetosa - Muhly Grass
(apparently a hybrid)
Vaccinium vacillans var. *missouriense*
(apparently not a valid taxon)

These species are too widespread to be considered for listing:
Penstemon cobaea var. *purpureus* - Purple Penstemon
Plantago cordata - Heart-leaved Plantain
Rubus missouricus - Prickly Groundberry
Saxifraga forbesii - Forbes' Saxifrage
Veratrum woodii - Wood's False Hellebore
(Note: *Veratrum woodii* and *Plantago cordata* seem to be more common in Missouri than in any other state in which they occur.)

The listing process is a formal "rulemaking" procedure that is followed when determining which species should be placed on the U.S. List of Endangered and Threatened Wildlife and Plants. Nominations for listing, delisting, or changing a species' classification may come from individuals or organizations, states, scientists, or U.S. Fish and Wildlife Service biologists. The proposal to list a species as threatened or endangered is published in the Federal Register, a daily publication of the federal government. Then the public, state authorities, and other interested parties are asked to comment on the proposal and offer any new information that they may have about that particular species. After that period for public comment, the Fish and Wildlife Service reviews all comments and any new information, then decides which category of protection a species should receive or whether it should even be listed. The final rulemaking is again published in the Federal Register.

The status reports prepared by the Conservation Department are not intended for general distribution. The Department is considering the publication of a condensed version of this report next year.

Members of MONPS will be interested to learn of the status of an orchid so rare that it is not known whether or not it can now be found in our state. Isotria medeoloides, the Small Whorled Pogonia, was formally proposed for listing as an endangered species in the Federal Register of September 11, 1980. Governors, state agencies, and biologists in 17 states as well as the Missouri Native Plant Society have been asked to comment on this proposal. This rare orchid has only been known from one site in Missouri, recorded from a wooded limestone hill near Glen Allen (Bollinger County) in 1897. However, it is possible that this species will be found again in the state as a new site was discovered in southern Illinois in 1973.

Isotria medeoloides is often referred to as the rarest orchid in America. Botanists with the U.S. Fish and Wildlife Service report that the species is currently known from only 16 sites in the eastern U.S. and Canada. If no new populations are reported during the public comment period, the Small Whorled Pogonia will soon be legally protected under the Endangered Species Act of 1973. This will be the first plant that has occurred in Missouri to be formally listed as an Endangered Species.

OUR 'MISSOURI' PRIMROSE NOW PROPERLY OENOTHERA MACROCARPA!

Warren L. Wagner
Graduate student, Biology Department
Washington University
St. Louis, MO 63130

The Missouri Primrose or Glade Lily is well known to anyone who has visited a Missouri glade or for that matter anyone who has examined the three MONPS logo entries based on this species which appeared in the Fall 1980 issue of this journal. This beautiful plant with its striking large yellow flowers is one of the most conspicuous wildflowers of Missouri's glades, indeed of the entire state. It has had a 165-year history as a horticultural species in many temperate areas of the world. In spite of these well known qualities, few people are aware of the time and place of its discovery, or of its correct scientific name. The nomenclatural history of the Missouri Primrose was recently investigated as part of a systematic and evolutionary study of Oenothera section Megapterium, a group of four species of which the Missouri Primrose is a very specialized member.

The reasons for the confusion in the nomenclature of this species are not entirely clear, but probably arose from two sources. During the early 1800's there was much less communication than now, and this often resulted in different authors publishing different names for the same plant. Secondly, the first truly international code of botanical nomenclature did not exist before 1930 and the only rules during the early 1800's were those of common accord. This also resulted in more than one name being proposed for the same plant. In many cases the confusion due to poor communication and lack of established rules has led to the adoption of a later name, as in the case of the Missouri Primrose, rather than the first validly published name, which under most circumstances must be accepted as the correct name.

A rather complete understanding of the nomenclatural history of the Missouri Primrose has been achieved by piecing together bits of information from various published sources, which are listed in the bibliography, and a careful examination of the known early collections. Most early specimens are difficult to interpret because their labels are very fragmentary. More importantly, these collections, if type specimens, were not labeled as such, since the concept of a type specimen in botany did not come into common use until the beginning of the 20th century. To compound the problem, published descriptions were frequently sketchy.

John Bradbury and Thomas Nuttall were the first trained botanists to visit what is now Missouri. John Bradbury, an Englishman, was collecting plants in America under the auspices of some members of the Liverpool Botanic Garden. He spent the entire year of 1810 in the vicinity of St. Louis. The bulk of his explorations during 1810 centered in areas in and around Ste. Genevieve and St. Louis. Thomas Nuttall, also from England and a prominent figure in the botanical history of the United States, arrived in St. Louis in September of 1810 to await the departure from St. Louis of the Astorian Expedition (incorporated as the Pacific Fur Company) which planned the following spring to retrace Lewis and Clark's route to the mouth of the Columbia River. Nuttall was included in the expedition at the invitation of its overland leader, Wilson Price Hunt. At the same time Nuttall had contracted with Benjamin Smith Barton, a Philadelphia physician and a University of Pennsylvania professor, to obtain collections of "animals, vegetables, minerals, Indian curiosities, etc." in the unexplored regions of the great plains of the west, for Barton's exclusive use.

Bradbury and Nuttall departed from St. Louis, then a 46-year-old frontier town of 1400 inhabitants, on a trip to the lead-mining district in November of 1810. It was on this excursion that a specimen of Oenothera macrocarpa was first collected. This specimen, the type of Oenothera macrocarpa, is now deposited in the herbarium at the Academy of Natural Sciences in Philadelphia. The two botanists apparently made several other excursions together during the winter of 1810-11, but collected plant specimens only on the November trip. The following spring they journeyed up the Missouri River together with the fur trappers, but that is another story.

The locality where Oenothera macrocarpa was collected on their trip to the "lead mines" has never been clearly determined. Nuttall, writing a few years later in his Genera of North American Plants (1818), states that the locality he and Bradbury explored was "on the elevated summits of the calcareous and petrosiliceous hills ... in the vicinity of the lead mines of the river Meremeck, 30 miles from St. Louis, Louisiana." Both Pennell (1936) and Ewan (1971) concluded that this locality was in Franklin County, Missouri. Their conclusion is apparently based solely on the mention of 30 miles from St. Louis on the Meramac River. On the face of it, this seems plausible, but does not, I believe, hold up based on the available information about their stay in the St. Louis area. It is much more likely that they were in southwestern Jefferson and northeastern Washington Counties, in the vicinity of the Big River. This deduction is based upon two independent points which are elaborated below.

First, and most important, is that the mines (Richwood, Belle Fontaine, Elliot's Diggings, Old Diggings, Mine à Breton) that Bradbury mentions visiting in his journal (Thwaites, 1904) are all in Washington County near the Big River and its tributaries. Moreover, he describes the location of the mines as being along the "Negro Fork of the Mirramac River." The only problem is that he does not directly state that this is the area to which he took Nuttall in November, 1810. It would seem logical, however, that he would take Nuttall to areas he knew well, since he had been in the St. Louis area for the previous 10 months in and around the mine district and Ste. Genevieve. There is no indication that he went to any mines, other than those cited. In support of this line of reasoning is the fact that Nuttall (1818) gives Bradbury credit for the discovery of Oenothera macrocarpa, as well as Bumelia oblongifolia [= B. lanuginosa (Michx.) Pers. var. oblongifolia (Nutt.) R.B. Clark], and Donia squarrosa [= Grindelia squarrosa (Pursh.) Dunal], all which were collected on the trip to the lead-mines.

The second point in support of Jefferson County comes from a comment Nuttall made in 1821 (Nuttall, 1821, p. 18) concerning large quantities of a white and friable sandstone located near a branch of the "Merrimec" River which was being developed for use in glassmaking. The only sandstone outcrop he could possibly be referring to is Sandy Ridge in Jefferson County.

Since it was November when Bradbury took Nuttall to Jefferson and Washington Counties collecting, there was not much in flower, but Nuttall collected what he could, especially a large quantity of seed which he later grew in England. These collections, except perhaps a few made by Merriwether Lewis in 1806, are the earliest specimens from Missouri. Among them was a small stem with a few leaves and a large 4-winged capsule of the Missouri Primrose. Also collected on this trip were Grindelia squarrosa, Psoralea onobrychis Nutt., P. esculenta Pursh, Bumelia lanuginosa var. oblongifolia, Mentzelia oligosperma Nutt., and probably Baptisia leucophaea Nutt. and Echinacea purpurea (L.) Moench.

The next spring, Nuttall and Bradbury accompanied the Astorian Expedition up the Missouri as far as North Dakota, making a number of very interesting collections on the way. From here they split up and returned to St. Louis separately, Bradbury in late July and Nuttall much later in October of 1811. Both men sent their collections back to England, but only Nuttall was able to leave North America before travel was interrupted by the War of 1812.

Nuttall spent the next three years in England, growing many of his plants and writing descriptions. At that time exotic North American plants were highly desired for English gardens and there was a healthy market for the sale of these plants. Nuttall made an arrangement with the Fraser Brothers Nursery to sell some of his plants, and for the 1813 season he wrote a catalogue of 89 species which were for sale. In this four-page list usually known as "Fraser's Catalogue" he adequately described 14 new species and one variety from his trip to St. Louis and up the Missouri River. This was the first publication to describe new species from Missouri. The only new species listed which were definitely collected in Missouri are the Missouri Primrose which Nuttall named Oenothera macrocarpa (large fruit), and Phalangium esculentum [= Camassia scilloides (Raf.) Cory]. Yucca glauca, Dalea enneandra and Rudbeckia columnifera [= Ratibida columnifera (Nutt.) Woot. & Standl.] were also described but because the first and second are known only from Atchison and Holt Counties and the Ratibida only from Clay and Jackson Counties (Steyermark, 1963), it seems doubtful that Nuttall would have collected these in Missouri. It is more likely that he first saw these three species farther west on the plains where they are common.

Curtis's Botanical Magazine was established in 1787 in order to publish beautiful color plates along with lengthy descriptions of exotic plants being grown in English nurseries and gardens. It was here in November 1813 that John Sims, then editor, wrote another description of the Missouri Primrose and named it Oenothera missouriensis, based on the plants raised from Nuttall's seed at Fraser Brothers Nursery. Sims was aware of the publication of "Fraser's Catalogue" some months earlier, and even cites it in several instances, such as Bot. Mag. 38 pl. 1574, Aug. 1813, when he proposed a new combination for Phalangium esculentum as Scilla esculenta (Nutt.) Sims (= Camassia scilloides). Thus, it is unknown why he later ignored Nuttall's adequate description for Oenothera macrocarpa and proposed the name Oenothera missouriensis. Unfortunately, the latter name is the one that has largely been adopted since that time. The correct name, Oenothera macrocarpa Nutt., has been used with increasing frequency since James Reveal's paper (1968) which gives a detailed analysis of the 89 names in "Fraser's Catalogue."

Bibliography

Ewan, J. 1971. Introduction in T. Nuttall, The Genera of North American Plants. (Facsimile of 1818 ed.)

Graustein, J.E. 1967. Thomas Nuttall Naturalist: Explorations in America 1808-1841. Harvard Univ. Press, Cmabridge, XIII, 481 pp.

McKelvey, S.D. 1955. Botanical Exploration of the Trans-Mississippi West, 1790-1850. Arnold Arboretum, Jamaica Plain, Mass., pp. xl, 1144.

Nuttall, T. 1813. "A catalogue of new and interesting plants collected in upper Louisiana, and principally on the River Missourie, North America" for sale at Messrs. Fraser's Nursery for curious American plants, Sloane Square, King's Road, Chelesea, London, 4 pp.

Nuttall, T. 1818. The Genera of North American Plants and a Catalogue of the Species to the year 1817. Published by T. Nuttall, Philadelphia, 2 vols., 312 & 254 pp.

Nuttall, T. 1821. A Journal of Travels into the Arkansa Territory, during the year 1819. Philadelphia, 296 pp. (reprinted with notes as Vol. 13 of Thwaites, R.G. Early Western Travels: 1748-1846).

Pennell, F.W. 1936. "Travels and Scientific Collections of Thomas Nuttall." Bartonia 18: 1-51.

Reveal, J.L. 1968. "On the names in Fraser's 1813 Catalogue." Rhodora 70: 25-54.

Schollcraft, H.R. 1819. A View of the Lead Mines of Missouri. Charles Wiley & Co., N.Y., 299 pp.

Sims, J. 1813. Oenothera missouriensis. Bot. Mag. 39: pl. 1592.

Steyermark, J.A. 1963. Flora of Missouri. Iowa State University, Ames, 1728 pp.

Thwaites, R.G. 1904. Early Western Travels 1748-1846: Bradbury's Travels in the Interior of America, 1809-1811. Vol. 5. Arthur Clark Co., Cleveland, 316 pp.

Winslow, A. and Robertson, J.D. 1894. "Lead and Zinc Deposits." Section I. Missouri Geol. Survey 6: XXI, 1-387.

PLAN TO BE WITH US IN MARCH

As announced in the minutes of the December 6 MoNPS Board Meeting, in Kansas City, our next "coming-together" will occur during the first full week-end in March. MoNPS members will meet at 10 a.m., Saturday, March 7th, in the Student Union on the University of Missouri campus, in Columbia. The number of the room in which our meeting will be held will be posted on a bulletin board at that time. Two special attractions in conjunction with this will be a slide presentation by Sherry Morgan, on rare flowering plants of Missouri. A report on the work that Morgan has been doing in our state will be found on pg. 12 of this issue of Missouriensis. Furthermore, members of MoNPS will be given a tour of the University's herbarium, second largest in the state.

And there is more! As also announced, this meeting will be held at the same time as a conference on Ozark Wildlife, called by the Missouri Wilderness Coalition, and also meeting on the University campus. Highlight of the conference will be a talk on Saturday evening, March 7, by David Brower, founder of Friends of the Earth, long-time Director of the Sierra Club, and quite possibly the most distinguished environmentalist in our country today. Also in conjunction with the conference, there will be a reception Friday evening, March 6, and meetings of various sorts during the day on Saturday. A field trip is planned for Sunday, and MoNPS members are invited to join in this, as in any or all of the other conference activities. For more detailed information, contact John Karel, 29 Bearfield Rd., Columbia, 65201. (Incidentally, Karel assures your concerned Editor that there are all sorts of places in the same building as our meeting will be held, where hungry MoNPSers will find lunch readily available!)

SOME THOUGHTS ON COLLECTING AND HERBARIA

Paul L. Redfearn, Jr.
Department of Life Sciences
Southwest Missouri State University
Springfield, MO 65802

In the broadcast media there is a saying that if you don't have it on tape or film, you don't have it. The same might be said for plant records. If a plant is not collected, mounted, and deposited in a herbarium, it is not a record useful to the taxonomist, geographer, ecologist or even for environmental impact and assessment studies because its presence and exact taxonomic status cannot be verified. Yet, there is a disturbing trend today by professional botanists, students, and naturalists not to collect voucher specimens. I do not know exactly why this is true, but I suspect it is due to a number of different reasons. There seems to be a lack of appreciation of the scientific value of a voucher specimen deposited in a herbarium. Some I know fear that recording the location of a rare species may lead to its extinction by irresponsible collectors. In other cases I suspect that just plain laziness is the reason, for it does take time and effort to collect, prepare and mount a collection. None of these reasons, and there may be others, are sufficient for not collecting voucher specimens of plants and depositing them in a herbarium. If plant systematics, geography, and ecology are to remain dynamic, there must be verifiable records that serve to record the distribution of a species as well as provide information for present and future evaluations of its taxonomy, geography, and ecology.

As the curator of a small regional herbarium at a state university, I may be more sensitive to the value of voucher specimens in a herbarium than others because I have seen many examples where such specimens have been useful to someone studying a particular species or group of plants. Let me cite a few specific examples of how herbarium records, or lack of records, can be important. There are many species in Missouri that are rare, or appear to be. Yet, many times I have colleagues and students come in and casually report they have seen this or that species somewhere. "Where?" I ask. "Have you collected a voucher specimen?" More often than not the answer to the last question is negative; even, however, if it is positive, it may be months or years, if ever, before the collection is mounted and labeled and ready for accession in a herbarium. In the meantime requests for collections of that species are received, but since vouchers have not been deposited in the herbarium, important finds go unrecorded and unstudied.

Another example involves species that are misdetermined and later reported in the literature. If voucher specimens are not available in a herbarium, the chance that the errors will be detected is nil. Such would have been the case of an orchid incorrectly reported in a paper on the flora of a national park in Arkansas* or for a moss I reported from eastern Missouri. If a voucher specimen of this moss had not been deposited at the Missouri Botanical Garden where it was later studied by a European researcher, my error might have gone undetected. In this case interesting phytogeographical information would not be available: as it turns out, this particular moss is in a genus entirely new to the United States, previously known only from Central America!

There is also the tendency to overlook the collection of common species. We all do this. Yet, should we? I recall that several years ago a researcher came to our herbarium to look at specimens of Flowering Dogwood. He was interested in the phenology of this tree and herbarium records can give valuable data in this science.

But who collects Flowering Dogwood in flower?

Environmental assessment and impact studies are increasingly important activities of botanists to whom they furnish opportunity to expand their knowledge about the distribution and ecology of many species. Yet many such studies are not adequately documented by voucher specimens, the importance of which can be much broader than the original purpose of the study. A couple of years ago I was involved in an environmental impact assessment in southwest Arkansas. The collections made during this study were deposited in the herbarium at Southwest Missouri State University where they were soon thereafter studied by a botanist working on checklists of the flora of Arkansas. I feel that when we accept funds to do environmental studies, we have an obligation to include the costs of time and money to properly document them.

These are only a few examples of the value of good collections that are subsequently deposited in a herbarium. More could be cited, but I want to comment on one other problem associated with collecting plants in Missouri today. There seems to be an overly protective attitude by federal and state agencies about making collections in areas under their control. While I share their concerns about indiscriminate collecting or removal of plants for non-scientific purposes, I would argue that too tight a bureaucratic control will stifle the production of useful distributional and ecological data. I would suggest that professional botanists and their students should be issued, upon application, permits for the general collecting of plants. Some rules, of course, are appropriate. For instance: (1) Whenever possible the rootstock of the plant should not be disturbed; (2) Collecting in view of the general public should be prohibited; (3) The on-site responsible agent should be notified before making collections; (4) Voucher specimens should be deposited in a recognized herbarium; (5) Lists of all collections should be provided to the responsible agency; (6) In particularly sensitive areas, the exact locality could be omitted from the labels, and available only from the responsible agency. There may be other rules, but these seem essential.

The botany of Missouri would not be where it is today if it were not for the collectors of the past who have documented their observations by collecting and depositing voucher specimens in herbaria. Let's keep our knowledge of the flora of Missouri growing by fulfilling our professional responsibility as taxonomists, ecologists, and naturalists to properly document our observations.

---

*Dr. Redfearn has supplied the following reference to illustrate this point.

Castanea 44: 59-60. 19791

"Spiranthes Lucida In Arkansas"--*Spiranthes lucida* (H. H. Eaton) Ames was found growing along the edge of North Sylamore Creek at the Gunner Pool Recreation Area, Sylamore District, Ozark National Forest, Stone County, Arkansas. This is the first record of the occurrence of this species in Arkansas and is a southwestward extension of its range. An earlier report by Thompson (1977) from Lost Valley State Park in Newton County is an error; his collection in the herbarium of Southwest Missouri State University is, according to an annotation by E. B. Smith, *Spiranthes vernalis* Engelm. & Gray.

Voucher specimens have been deposited in the herbaria of Southwest Missouri State University, the University of Arkansas, and Memphis State University.--Paul L. Redfearn, Jr., Department of Life Sciences, Southwest Missouri State University, Springfield, Missouri 65802.

LITERATURE CITED

Thompson, R. L. 1977. "The vascular flora of Los Valley State Park, Newton County, Arkansas." Castanea 42:61-94

TREE KEY FOR THE BLIND

The following is excerpted from an article in the May, 1979, issue of The Michigan Botanist. We print it as an interesting possible adjunct to the State's imaginative service to blind Missourians in the self-guiding trail at Elephant Rocks State Park, with its braille interpretations of the Park's geologically and botanically significant features.*

COMMON BROADLEAF TREES OF SOUTHWESTERN MICHIGAN:
A KEY DESIGNED FOR BLIND PERSONS

Michael H. Fleckenstein
Gove Associates, Inc.
1601 Portage St., Kalamazoo, 49001

Paul E. Ponchillia
Department of Blind Rehabilitation
Western Michigan University
Kalamazoo, 49008

.....We have attempted to design a key, on tape, which would allow a blind person, who has had no previous training, to tactually identify common broadleaf trees without guidance....We felt that the nature of blindness dictates the use of a dichotomous key format because tones can be used to facilitate rapid searching for alternate statements. In our key, technical wording, when required, is supplemented by explanations comparing tree parts to parts of the human body. It was concluded that this would eliminate concept problems. Typical examples might read: "Leaves and branches opposite, similar to the arms on a human body" or "Leaves and branches alternate, similar to the right arm and left leg on a human body."

The key is based primarily on leaf characteristics, because leaves are the part most readily available to the blind user and their characteristics can be easily discriminated by touch. Characters such as bark texture, fruit type and odor are given after the common name to verify identification. Twenty-six of the most common kinds of trees (and some other woody plants) of southwestern Michigan are included in the key: Viburnum, Hackberry, Cherry, Poplar, Willow, Redbud, Osage Orange, Apple, Birch, Mulberry, Sassafras, Ash, Box Elder, Buckeye, Dogwood, as well as Maples, Oaks and Elms which are subdivided into species.....

Conceiving of a keying technique to allow a congenitally blind person to relate plant parts to some known entity is difficult. However the body appendage arrangement seems to be the most satisfactory approach and is used in all pertinent comparisons in the key. Much time was dedicated to selecting characteristics which are distinguishable by tactile methods, such as shape, size, texture, and arrangement of leaves and stems.

The key is easy to manipulate and can be carried in the field. It is recommended for persons from junior high school level and up. Due to the conceptual problems faced by congenitally blind persons, we may have overlooked ways to make the key suitable to the needs of the users. Consequently, we would appreciate critical comments. A limited number of copies of the key are available on loan from the Department of Blind Rehabilitation, Western Michigan University.

*Editor's note: A similar interest in expanding the enjoyment of nature by handicapped persons is the beginning, last May, of construction by the National Park Service, at Fire Island National Seashore, of a 5,000 foot long nature trail designed to allow people confined to wheelchairs or dependent on crutches or canes to travel on their own into the high dunes (of that area) that overlook the Atlantic Ocean and the Great South Bay. (New York Times, 5/1/1980)

EDITORIAL ASSISTS

Our Journal, Missouriensis, has turned out to be so precocious that, even before its second birthday, it has achieved two working committees devoted entirely to its improvement! Our new Editorial Committee is already functioning and has helped in preparation of this, our 7th issue. Your Editor announces with gratitude the names of the committee's members: Edgar Denison, Barbara Estill, Catherine Filla, Ann Ruger, Susie Russell, Joanna Turner, and June Wehnert. Activities of this committee, to date, have consisted of typing and pasting material, before the issue is reproduced. A new activity will involve contacting native plant organizations in other parts of the country, with the suggestion that we exchange publications and/or other material. It is hoped that from this exchange will come more articles such as the one reprinted herein from the Michigan Botanist, as well as ideas for articles or departments that will improve our own publication, The Editorial Committee was also charged, at the December Board meeting, with the responsibility for preparing the short brochure about MoNPS that will be inserted as a "hand-out" to accompany the excellent new display board prepared by Denison and Karen Haller.

The second committee is too newly formed to have functioned as such, although Gary Reese, our volunteer coordinator for the clearing house of botanical data, has already reviewed a number of such articles as those on new state and county records, so that we can be doubly sure of the authenticity of such announcements. This does not, of course, imply any lack of confidence in such distinguished contributors as Dr. Nightingale and Arthur Christ; but even they cannot always be sure that such reports are entirely new, and do not always have available all the most up-to-date information on such subjects. Dr. Reese's newly appointed companions on what does not yet have an official title are 2 members of our Board, Robert Mohlenbrock of Southern Illinois University, and Wallace Weber of Southeast Missouri State University. To all 3, welcome aboard! You will constitute the Publication Committee or the Review Committee....or perhaps you will choose to call yourselves by another name. Whatever that may be, your contribution will be greatly appreciated by your Editor, as it is often difficult to be the sole arbiter of what should and what should not be accepted for publication.

We are printing below a set of rules for typing manuscripts submitted to Missouriensis, in the hope that if those of you who can readily follow them will make an attempt to do so, preparation of each issue will be enormously facilitated. Please do not feel that if you are unable to follow the rules, you should not submit a manuscript; we of the Editorial Committee would feel that publication of these rules will have defeated its own purpose if our contributors react in such a way; on the other hand, we know that many of our contributors type very well indeed, and would probably not find it onerous to abide by the suggestions we make below:

Rules for submission of manuscripts

Manuscripts should be typed on 8½x11 paper.
Margins should be approximately 10 spaces on both sides.
Titles should be centered on the page.
The typing should be single spaced, with double spacing between paragraphs; use block style (no indentation of paragraphs).
Articles should be signed and authors' address given as briefly as possible at the top of the article immediately under the title. The text of the article should begin two spaces below.

A manuscript should be no more than 3 typewritten single-spaced pages, although this rule should not be considered universally binding.
Any drawings or maps for publication should be submitted in black or india ink.
Bibliographies and/or references should be limited to necessary minimum, e.g. author's name; if article, capitalize and enclose in quotes. Title of book or Journal, (latter: vol., no., pg., etc.); date.

Botanical names

The genus is capitalized. The species is lower case. The entire botanical name is underlined.
General reference to genera should be in lower case (e.g. violet), although references to a species by generally recognized common name should be capitalized (e.g. Bird's-foot Violet).

COMMENT ON WHITLOW

Don Siehr,
Rt. 4, Box 25,
Rolla, MO 65401

In the Fall issue of Missouriensis a request was made for comments on the article by Carson Whitlow. Since I had earlier expressed my unhappiness with some of the "articles of faith" of the Missouri Native Plant Society, I will say that I am pleased to learn that there are at least two factions within the Society. I side with those who feel that preservation of wild plants by propagating them is a valid endeavor of the Society and hope to see more articles like that of Whitlow in Missouriensis.

I don't believe there are many persons who would join MONPS who would wilfully destroy a stand of rare (or even common) native plants for any reason. That is the reason that I oppose the "articles of faith" as they now stand.

Here's to more articles on native plant propagation!

GRACIAS

The Board of Directors and other members of MoNPS who attended the December 6 meeting in Kansas City owe enthusiastic thanks to member Norlan Henderson, of the University of Missouri-Kansas City, who arranged that the facilities of the Linda Hall Library be made available to us. For many of those unacquainted with the area, this was a particular treat, heightened by the feast of bibliographic "goodies" laid out by the Library's Director, Thomas Gillies, as noted in the minutes. This is not the place to elaborate further on the collections of this remarkable institution, dedicated to works on science and technology, but the Wall Street Journal did so, on November 10, 1980, in a front page article entitled "Need an Old Article on Silicon Concrete? Look in Kansas City."

ERRATA

Despite efforts to put Missouriensis together with as few errors as possible, they do creep in, and "we" are sorry. In our last issue names of the authors of two articles about the Prairie Conference in early August somehow got lost,in the process of cutting up our typescripts and pasting material on the layout dummy. The first was written by John Wylie,Director of the Natural History Section of the Department of Conservation, in gracious and prompt response to a request from your Editor for an introduction to her article entitled"A New Kind of State Park."

Incidentally, we are aware that MONPS is spelled "MoNPS" in some parts of this issue. Opinions about which usage is preferable seem to differ. If you have thoughts on the subject they would be welcome.

OFFICERS OF THE SOCIETY

President: Jon L. Hawker
Biology Department
St. Louis Community
College at Meramec
11333 Big Bend Blvd.
St. Louis, MO 63122

Vice President: Melvin Conrad
Biology Department
Northeast Missouri
State University
Kirksville, MO 63501

Secretary: Paul Nelson
Division of Parks
and Recreation
P.O. Box 176
Jefferson City, MO
65101

Treasurer: James H. Wilson
Department of
Conservation
P.O. Box 180
Jefferson City, MO
65102

Editor: Erna R. Eisendrath
Biology Department
Box 6811
Washington University
St. Louis, MO 63130

BOARD OF DIRECTORS

Terms Expire
June, 1982

John Karel
Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65101

Robert Mohlenbrock
Department of Botany
Southern Illinois University
Carbondale, IL 62901

Terms Expire
June, 1981

Diana James
850 West 52nd Street
Kansas City, MO 64112

Virginia Klomps
Missouri Department of Conservation
P.O. Box 180
Jefferson City, MO 65102

Terms Expire
June, 1983

Kenton Olson
Biology Department
The School of the Ozarks
Point Lookout, MO 65726

Wallace Weber
Biology Department
Southwest Missouri State University
Springfield, MO 65802

ADVISOR

Richard Daley
Missouri Botanical Garden
P.O. Box 299
St. Louis, MO 63166